REMARKS

Allowable Claims:

Applicant thanks the Examiner for indicating that claims 3-5, 14-17, 32, 33, 36 and 37 are allowed. Further, Applicant thanks the Examiner for indicating that claims 18-31 also contain allowable subject matter.

Claim Rejections:

Claims 1-33, 36 and 37 are all of the claims pending in the present application and currently claims 1-2, 6-13 and 18-31 stand rejected.

35 U.S.C. § 112, 2nd Paragraph Rejection - Claims 1-2, 6-13 and 18-31:

Claims 1-2, 6-13 and 18-31 stand rejected under 35 U.S.C. § 112, 2nd paragraph as being indefinite. Specifically, the Examiner has indicated that it is not clear how the illuminating light is able to converge at a point in space when the light passes through the sample. Further, the Examiner pointed out that, in claim 1, the claim language indicates that the light converges at a point prior to passing through the sample.

In view of these comments, Applicant has amended claim 1 as shown in the previous section to address the Examiner's concerns.

In view of these amendments, Applicant submits that the claim language is clear and that the present claim is clear and definite to a skilled artisan. Accordingly, Applicant hereby requests the Examiner reconsider and withdraw the above 35 U.S.C. § 112, 2nd paragraph rejection of the claims.

35 U.S.C. § 103(a) Rejection - Claims 1 and 6:

Claims 1 and 6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,305,139 to Greenberg in view of U.S. Patent No. 5,684,626 to Greenberg. In view of the following discussion, Applicant respectfully traverses the above rejection.

As admitted by the Examiner, the '139 patent fails to disclose using a single light source. To cure this deficiency, the Examiner relies on the teachings of the '626 patent. However, Applicant disagrees with the Examiner and submits that a skilled artisan would not have combined the references as suggested by the Examiner, and even if the references were combined, the combination would fail to teach or suggest each and every feature of the claimed invention.

Specifically, Applicant notes that the '626 patent fails to disclose using an illuminating means which emits a single beam of illumination light which is able to converge at a converging point in a space, and where the illuminating means converges the light that is transmitted through or reflected by the sample at the converging point. See claim 1. In fact, the '626 patent teaches away from this.

As shown in Figure 1, of the '626 patent, (also see col. 4) the "beam 10, from a light source 40, illuminates the condenser 11 which focuses the light onto an object (specimen) 14. The beam 10 then *diverges* onto the objective lens 12 which projects an image of the specimen onto the eyepiece 13 which further magnifies the image so that an observer 16 is able to see a sharp image of the specimen 14." Col. 4, lines 14-19 (emphasis added).

Thus, in the '626 patent, the illuminating light is only focused by a condenser lens, such that no converging light, converging a point in space, is used as illuminating light, as in the present invention. Stated differently, the '626 patent employs diverging light as opposed to converging light.

Additionally, in the '626 patent, a focusing surface is fixed on a surface of the sample, which is contrary to the position of the converging point in the amended claim 1. This is readily apparent in view of the above discussion regarding the '626 patent, where the light focused on the sample is *diverged* to be projected in an objective lens after passing the light through the sample.

However, contrary to the '626 patent, in the present claim 1, the converging light converges at a point in space which is positioned between the sample and an objective lens. Thus, in the present invention the light does not converge on the sample, but at a point between the sample and the converging lens.

Thus, a skilled artisan would not have found it obvious to combine the above references, but even if the references were combined, the resultant combination would not have the claimed illumination means, because the '626 patent teaches away by employing a diverging light to the objective lens.

Further, in the '626 patent, the light source used in the embodiments shown in Figs. 12-13 is not a single light source. This is made apparent from the description of column 8, which states that "[w]here the number of faces of pyramid mirror 41 are infinite, the pyramid mirror becomes a cone mirror as seen in Fig 12 and 13." Col. 8, lines 58-60. Thus, in the '626 patent, the

number of mirror faces corresponds with the number of light sources and, therefore, having a plurality of mirror faces corresponds to having a plurality of separate light sources.

On the contrary, in the present invention, the light transmitted through or reflected by the sample forms a diffraction refractive image of the sample adjacent to a converging point of the light and, therefore, illuminating light used in the microscope according to the claims is "coherent" light.

Thus, again, Applicant submits that it would not have been obvious to combine the teachings of the above references, and even if the references were combined, the result would not be configured as the claimed invention.

As stated above, light sources disclosed in either of the '139 and '626 patents are not single point light sources. Thus, even if the references were combined, there is still no teaching of using a single light source. Accordingly, it is not impossible to realize the microscope according to the claims in view of the '139 and '626 patents, because in the claimed invention a single point light source is employed.

Additionally, even if the references were combined, the result would be to employ the divergence aspects of the '626 patent (discussed above), where the light is diverged from the sample 14 to the objective lens 12. This is contrary to the present invention.

Applicant further notes that in the '139 patent, a plurality of optical axes of incident light are shown. As shown in Fig. 2, the two arrows which appear to represent beams of light show "optical axles " of the incident lights from different light sources. (See column 7, lines 23-31 of the '139 patent). However, contrary to this, the light source of the claimed invention is a single

point light source and as the result, the number of optical axis of incident light is only one. It would not have been obvious to reduce the number of optical axis in the '139 patent down to one, particularly in view of the teachings of the '626 patent.

In view of the foregoing, Applicant respectfully submits that one of ordinary skill in the art would not have been motivated to combine the above references as suggested by the Examiner, and even if one combined the references as suggested the resultant combination would fail to disclose, teach or suggest each and every feature of the claimed invention. Therefore, Applicant submits that the Examiner has failed to establish a *prima facie* case of obviousness with respect to the claimed invention, as required under 35 U.S.C. § 103(a). Accordingly, Applicant hereby requests the Examiner reconsider and withdraw the above 35 U.S.C. § 103(a) rejection of the claims.

35 U.S.C. § 103(a) Rejection - Claim 2:

Claim 2 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the '139 and '626 patents, in further view of Shimada. However, as claim 2 depends on claim 1, and because Shimada fails to cure the deficient teachings of the '139 and '626 patents, Applicant submits that this claim is also allowable, at least by reason of its dependence.

35 U.S.C. § 103(a) Rejection - Claims 7-12:

Claims 7-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the '139 and '626 patents, in further view of Ellis. However, as claims 7-12 depend on claim 1, and because Ellis fails to cure the deficient teachings of the '139 and '626 patents, Applicant submits that these claims are also allowable, at least by reason of their dependence.

35 U.S.C. § 103(a) Rejection - Claim 13:

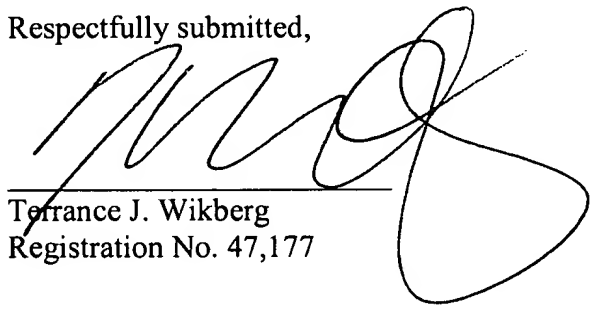
Claim 13 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the '139 and '626 patents, in further view of Ellis and Shimada. However, as claim 13 depends on claim 1, and because Shimada and Ellis fail to cure the deficient teachings of the '139 and '626 patents, Applicant submits that this claim is also allowable, at least by reason of its dependence.

Conclusion:

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Terrance J. Wikberg
Registration No. 47,177

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE
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